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The FCC's Monitoring of Residential Telephone Service

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The Honorable Glenn English
Chairman, Subcommittee on
Government Information, Justice,
and Agriculture
Committee on Government Operations
House of Representatives

The Honorable Mike Synar
Chairman, Subcommittee on Environment, Energy,
and Natural Resources
Committee on Government Operations
House of Representatives

Your November 5, 1985, letter asked us (1) to review the Federal Communications Commission's (FCC's) efforts to track and evaluate the effects of its regulatory decisions on telephone service, particularly in regard to rural areas, and (2) to undertake a broad review of the key issues and problems facing rural telephone companies and subscribers. This report presents the results of our review of the FCC's monitoring efforts. We are currently examining the issues and problems facing rural telephone companies and subscribers, and will report on this separately in late 1986.

The FCC's current monitoring of residential telephone service involves (1) reviewing U.S. Census data on the percentage of households having telephone service; (2) reviewing Bureau of Labor Statistics data on nationwide price changes in residential telephone service; and (3) gathering data on the amount of revenue increases requested by major telephone companies and the amount of increases awarded to them by state public utilities commissions. The FCC believes that these are the three key indicators of the effects of its regulatory decisions on residential telephone service. The FCC has found that

- the percentage of the nation's households having telephone service has been stable since 1983, with possibly a slight upward trend;
- the nationwide price increase during 1985 for total residential telephone services was approximately equal to the general rate of inflation; and
- the total amount of pending revenue requests by the major telephone companies at the end of 1985 was down substantially, indicating diminished pressure on state public utilities commissions to award increases in telephone rates in the near term.

Based on these results, the FCC has concluded that the state of residential telephone service is "healthy and getting healthier."

We agree that the FCC is monitoring important indicators of residential subscribership and costs. We believe, however, that the limitations of the FCC's monitoring approach must be considered in evaluating its conclusion about the health of residential telephone service. In this regard, we note that the FCC's monitoring is a modest effort, relying on broadly aggregated data which does not provide insight into conditions at the local level, particularly in rural areas. The FCC, however, considers its broad monitoring approach adequate to detect threats to residential telephone service. The FCC, therefore, plans no detailed monitoring unless problems first become evident in the three areas it is currently monitoring or are brought to its attention by state public utilities commissions and the industry.

A brief discussion of our findings follows. A more detailed description of these findings appears in appendixes I through IV.

Background on the FCC's Monitoring Program

Title I of the Communications Act of 1934, as amended (47 U.S.C. 151 et seq.) contains the nation's policy for common carrier telecommunications, including telephone service. The Act created the FCC "[f]or the purpose of regulating interstate and foreign commerce in communication by wire and radio so as to make available, so far as possible, to all the people of the United States a rapid, efficient, Nation-wide, and world-wide wire and radio communication service with adequate facilities at reasonable charges . . . ." One of FCC's basic obligations is to promote the general availability of residential telephone service, often referred to as its "universal service" goal. According to U.S. Census Bureau data for March 1986, slightly more than 92 percent of the nation's households have telephones.

In recent years, the domestic telephone industry has experienced fundamental changes centering on the breakup of the Bell Telephone System and the increasing amount of telephone services being offered on a competitive basis. The FCC and the courts have issued a number of regulatory decisions designed to encourage and assist the industry's transition from a monopolistic structure to a competitive one. The FCC believes that the dynamic nature of increased competition will benefit the public in the form of technical innovation, lower costs, and increased responsiveness to consumer needs. For example, the FCC has allowed competition in the manufacture of telephone equipment, giving consumers the right to

purchase and install equipment of their own choosing. The FCC has also allowed competition in the provision of interstate long distance service, giving consumers a choice of price and service.

Some FCC decisions to bring about a more competitive telephone industry have proved to be controversial, however. The FCC generally maintains that a pricing structure based on the actual costs to provide particular telephone services (cost-based) is better suited to the emerging competitive structure of the industry than the traditional practice of setting rates for some services (such as long distance) well above their costs in order to hold down costs for other services (such as local residential). For example, in its 1982 access charge decision, the FCC changed a traditional method by which telephone companies recovered their fixed costs. In the past, a large share of these costs were recovered from interstate long distance revenues in order to keep local service rates low. With the access charge decision, however, local residential service customers now pay a flat monthly "subscriber line charge" that goes toward covering part of their local companies' fixed costs. The effect of this charge is to increase local residential service costs somewhat ($1 per month per line in 1985, increased to $2 in June 1986) and to decrease interstate long distance rates (since long distance service no longer has to cover as much of the local companies' fixed costs as before). Other FCC decisions, such as changing telephone companies' allowable depreciation rates[1] and limiting the percentage of fixed costs that local companies can allocate to interstate long distance service, may also create pressure for increases in local service rates.

Concerns have been raised over the effect of the FCC's decisions on the affordability of local service to low-income and elderly people. The impact of these decisions on rural areas and whether these areas will benefit from a competitive industry structure present another problematic issue. For its part, the FCC has stated that it has an obligation to monitor carefully the effects of its regulatory decisions on residential telephone service. In December 1982, the FCC directed its Common Carrier Bureau (which deals with telephone regulation) to develop a monitoring program to do this. Initially, in June 1983, the FCC proposed to gather and analyze detailed subscribership and rate information from each of the nation's 1,400 telephone companies to determine whether FCC regulatory decisions were affecting the availability and use of residential telephone service, how the prices of telephone services were

[1]On May 27, 1986, the U.S. Supreme Court found that the FCC may not preempt state regulation over depreciation of dual jurisdictional property for intrastate rate making purposes.

changing, and why such changes were taking place. Subsequently, by 1985, the FCC adopted a more general monitoring approach due to the cost and difficulties in gathering and analyzing such detailed information. Also contributing to this decision was the FCC's perception that local rates were not undergoing the sharp, rapid increases that some of its critics had predicted, thereby raising the question of whether there was an immediate need for detailed monitoring. At present, the FCC is using data from federal and state government sources and the trade press to track residential subscribership levels, telephone prices, and telephone company rate cases.

Objectives, Scope, and Methodology

The objective of our review was to evaluate the FCC's efforts to monitor the effects of its regulatory decisions on residential telephone service, particularly in regard to rural areas. Most of our work was performed at the FCC's headquarters in Washington, D.C., between November 1985 and March 1986. We interviewed officials in the FCC's Common Carrier Bureau responsible for managing the monitoring effort and analyzing the data. We reviewed available documents related to monitoring, including both FCC publications and internal correspondence. We interviewed officials at the Census Bureau and the Bureau of Labor Statistics in regard to the FCC's use of their data. We also interviewed officials at the Rural Electrification Administration (REA) to discuss rural telephone service issues and the FCC's contacts with the REA.

We have discussed the material in this report with officials of the FCC's Common Carrier Bureau and included their comments where appropriate. Our review was performed in accordance with generally accepted government auditing standards.

Residential Subscribership Levels

The FCC monitors the level of residential telephone subscribership by reviewing data from the U.S. Census Bureau's Current Population Survey (CPS). The CPS compiles demographic, employment, and income data from a nationwide sample of 58,000 households. Among its survey questions, the CPS asks whether there is a telephone in the household. Every 4 months, the FCC receives updates on the results of this question.

The CPS data indicates that, between November 1983 (when the CPS first began asking this question) and March 1986, the percentage of the nation's households having telephones has been relatively stable, averaging at 91.7 percent, with perhaps a slight upward trend. The CPS data also indicate no decline in subscribership at the state level. During this

period, however, average subscribership levels in several states have been considerably below the national average of 91.7 percent. (Mississippi is the lowest at 81.8 percent.) The FCC attributes these lower percentages to the particular geographic and demographic characteristics of individual states and does not consider this situation in itself to be a universal service problem.

Because the CPS data cannot be usefully broken down below the state level, the FCC has decided to rely on the states and the telephone companies to alert the FCC to any significant declines in residential subscribership at the local level.

Price Changes

The FCC's monitoring of telephone price changes uses data from the Bureau of Labor Statistics' Consumer Price Index (CPI) and Producer Price Index (PPI). Both the CPI and PPI provide telephone data at the national level only. The CPI data indicate that in 1985 the overall price of total residential telephone services (the combined cost of local and long distance services, plus miscellaneous charges) increased by 4.7 percent, somewhat higher than the 3.8 percent rate of general inflation. This marks a substantial decrease from the 9.2 percent increase in total residential telephone services for 1984. As for the price of local service itself, the FCC has pointed out that the PPI index for flat-rate local residential telephone service shows an increase of only 3.2 percent in 1985, down substantially from the 10.4 percent increase for 1984. This PPI figure does not, however, include the effect of the FCC's residential subscriber line charge, which is collected as part of the local service bill. With this charge included, the FCC estimates that the PPI would show an 11 percent increase in local service for 1985—nearly triple the rate of inflation for that year. In June 1986, the FCC raised this monthly residential subscriber line charge from $1 to $2 per telephone line. We calculate that this alone may increase the PPI for local residential service by as much as 7 percent in 1986. This charge, however, also resulted in an average 11.3 percent drop in interstate long distance rates for residential customers of AT&T. Other long distance companies are expected to lower their rates as well.

Revenue Requests and Awards

The FCC monitors telephone company requests for increases in revenues for intrastate telephone services and the amounts awarded by state public utilities commissions. The purpose of this monitoring is to forecast the potential for rate increases in intrastate telephone services. The

FCC reviews revenue requests and awards involving the 22 Bell Operating Companies and the major independent companies, which together provide 95 percent of the nation's local telephone service. Over 1,350 small, independent companies that provide the remaining 5 percent of the local telephone service are not covered. Many of these serve rural areas.

The FCC has reported that the total amount of revenue requests pending before state commissions dropped from nearly $7 billion in 1983 to about $1.7 billion in 1985. In addition, the total amount of increases awarded by the state commissions dropped from about $3.9 billion in 1984 to slightly more than $1.3 billion as of December 1985. The FCC believes that these declining national totals are a sign that telephone prices are stabilizing and that increases in rates for intrastate services will probably be milder in the near term.

The FCC's monitoring of rate cases generally does not include a review of the increases in the rates for local residential service that result from the revenue awards. In the past, state commissions often directed telephone companies to generate the bulk of their revenue awards from increases in rates for intrastate services other than local residential—such as business services and intrastate toll. This practice is often referred to as "residual pricing" of local service. The degree to which state commissions can continue to price local residential service residually is at the center of the current controversy over the effects of the FCC's regulatory decisions on residential rates. Currently, the FCC assumes that residual pricing of local residential service is still continuing and, consequently, does not routinely gather data on all residential rate increases that occur in the Bell Operating Companies and major independents. Rather, the FCC looks at residential rate increases only in cases where the amount of increased revenues awarded to a particular company is considered by the FCC to be unusually high. During 1985, the FCC did this infrequently because, in its judgment, there had not been many large revenue awards.

Rural Telephone Service

The FCC's monitoring does not analyze subscribership and cost data on rural telephone service. According to its current monitoring plan, the FCC is to monitor rural telephone service through cooperation with the REA, which has provided over $7 billion in outstanding loans to about 980 small, independent rural telephone companies. FCC officials told us in July 1985 that they had asked the REA to have its field offices report on

any problems that these companies experienced that threatened residential telephone service. These FCC officials said that they had not heard from the REA and assumed that no problems were occuring among these companies. We found, however, that the REA at that time was unaware of any formal request by the FCC to participate in the FCC's monitoring program. REA officials recently told us that they would be willing to help, but noted that the FCC still has not made clear what type of information it wants.

The FCC also planned to review financial and statistical data on these rural companies using annual reports filed with the REA by its borrowers. In connection with this, the FCC asked the REA to modify its annual report form to require the companies to include information on their local service rates. This modification was not adopted by the REA because the data needed to provide a precise picture of rates would have substantially expanded the form. The REA, however, is still willing to work with the FCC to develop a suitable alternative method for tracking rate increases.

Conclusions

The FCC's monitoring of residential telephone service indicates that the overall percentage of households with a telephone has remained relatively stable since 1983. At the national level, the price of total residential telephone services declined in 1985 to a point slightly above the 3.8 percent general rate of inflation, although the FCC's residential subscriber line charge largely caused the price of flat-rate local service to increase at nearly three times the rate of inflation. Finally, a continuing downturn in the total amount of telephone company revenue requests and awards indicates that, in the near term, there should be less pressure on the state public utilities commissions to award increases in revenues for intrastate services.

Although these data present a generally encouraging picture at the national level, we believe that the limitations of the FCC's broad approach to monitoring must be considered in evaluating its conclusion that universal service is "healthy and getting healthier." The FCC has little monitoring data on universal service conditions at the local level. In particular:

- The FCC's monitoring of residential subscribership provides little insight into the issue of whether significant changes are taking place within individual states at the local level.

- The FCC does not routinely monitor increases in the rates for local residential telephone service that result from revenue increases awarded to telephone companies by state public utilities commissions.
- The FCC has not monitored the impact of its regulatory policies on rural areas nor on the many hundreds of small, independent telephone companies that serve these areas.

Because the FCC does not have a monitoring program based on detailed data gathering and analysis, state public utilities commissions and the telephone industry are left to monitor universal service conditions at the local level. The FCC told us that if local level problems develop, it will hear about them from the states or the industry. Consequently, the FCC is depending on these commissions and the industry rather than on its own monitoring efforts for adequate warning of localized threats to universal service.

Recommendation to the Chairman, FCC

We recommend that the Chairman of the FCC direct the FCC's Common Carrier Bureau to develop a formal agreement with the REA on the role of the REA's field offices in providing information to the FCC regarding rural telephone companies that may be experiencing conditions that could threaten universal service. In addition, the FCC should reopen discussions with the REA for agreement on a feasible means of gathering data on residential rate increases among telephone companies financed by the REA.

As arranged with your office, unless you publicly announce its contents earlier, we plan no further distribution of this report until 30 days from its date of issue. At that time we will send copies to the Chairman, Federal Communications Commission; the Director, Office of Management and Budget; interested congressional committees, subcommittees, and individual Members of the Congress, as well as other interested parties. Copies will be made available to others on request.

J. Dexter Peach

J. Dexter Peach
Director

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Abbreviations

BLS	Bureau of Labor Statistics
CPI	Consumer Price Index
CPS	Current Population Survey
FCC	Federal Communications Commission
IAD	Industry Analysis Division
PPI	Producer Price Index
REA	Rural Electrification Administration

Development of the FCC's Monitoring Program

Between 1983 and 1985, the FCC worked on developing a monitoring program that would enable it to determine whether its regulatory decisions were affecting the availability and use of residential telephone service, how residential telephone service prices were changing, and why prices changed. Beginning with a 1983 proposal to monitor subscribership levels and prices in considerable detail, the FCC eventually adopted a much more general approach to monitoring.

The original FCC monitoring plan, issued in June 1983, proposed to gather detailed data on telephone subscribership and costs, and analyze the causes of local rate increases. For monitoring subscribership levels, the FCC sought comments on the feasibility of gathering data directly from all of the nation's 1,400 telephone companies on the percentage of households in their service areas that have telephones. For monitoring local service prices, the FCC proposed that the telephone companies submit detailed data on all available residential rate options, the number of subscribers to each, and the cost components that made up the lowest rate. The telephone companies would note changes in the lowest residential rate from the previous year and indicate whether they provided a "lifeline" service option to their subscribers.[1] The FCC also proposed to gather more detailed price and subscribership information from a stratified sample of telephone companies in order to determine the causes of rate increases and better ascertain subscribership trends at the local level. Finally, the FCC wanted to develop information on actions at the state regulatory level that might affect the price of intrastate telephone services.

Based on comments received from the telephone industry and others, the FCC concluded that its original monitoring plan would require the companies to undertake unduly burdensome and costly data-gathering and analytic efforts. Several telephone companies commented that they lacked the demographic data needed to determine on their own the percentage of households in their service areas that have telephones (the "penetration" level). FCC officials decided that it would be a costly process for the FCC itself to attempt to aggregate company data with census data in order to develop detailed penetration data. Regarding the collection of detailed price data, the FCC decided that local service rates included too many variables, such as different-sized calling areas and

[1]Lifeline service is a specially-priced local residential telephone service that has been specifically mandated by federal or state legislation or a state public utilities commission for the purpose of providing affordable telephone service to low-income households.

forms of local measured service, which would make it difficult to evaluate the significance of the data.[2] As for the stratified sampling of companies, the FCC eventually agreed with those commenters who questioned whether it was possible to trace the causes of rate increases to a particular federal action even with the detailed information that the FCC proposed to get from its sample.

The FCC reconsidered its original monitoring plan and adopted a revised plan in December 1984. In this revision, the FCC dropped its original proposal to gather information directly from the telephone companies. Instead, the FCC decided to rely on more generalized data on penetration and costs that are available from federal and state government sources as well as the trade press. The FCC also discussed undertaking other monitoring activities, such as determining accurately the effects of federal regulatory decisions on specific demographic and geographic groups; working with the Rural Electrification Administration to obtain early warnings of potential problems facing small, independent telephone companies; and developing an information data base to accurately predict future penetration levels. The FCC also mentioned the importance of "cooperative monitoring" with the states and invited state public utilities commissions and telephone companies to report any penetration problems to the FCC, though it did not discuss a specific mechanism for doing this. The FCC acknowledged that its revised plan was "less formal" than its original plan but maintained that it would still provide adequate information for detecting threats to universal service

The Industry Analysis Division (IAD) of the FCC's Common Carrier Bureau is responsible for carrying out the monitoring activities described in the revised plan. We found that during 1985 IAD concentrated on three of the activities described in the revised monitoring plan which it believes are the key indicators for determining the health of universal service:

- tracking the percentage of households that have telephone service using Census Bureau data;
- tracking telephone prices using Bureau of Labor Statistics' price indexes; and
- tracking the revenue requests and awards of major telephone companies using data from state rate cases.

[2]The rate of local measured telephone service is based on measures of actual usage, such as the number, duration, time of day, and distance of the local calls.

The chief of IAD characterizes these three activities as "pulse-taking" and maintains that they are adequate to determine the emergence of threats to universal service. He said that more detailed monitoring would be done if the current monitoring revealed problem areas, but that more monitoring is not needed now considering the favorable results evidenced so far. In a January 1986 memo to the FCC Chairman, he concluded that the data from IAD's monitoring activities indicate that universal service is "healthy and getting healthier."

IAD's "pulse-taking" approach to monitoring is supported by the chief of the Common Carrier Bureau. In his view, monitoring activities are "tools" which the FCC uses to ascertain whether any of its regulatory actions are threatening universal service in any way and, if so, what the causes and remedies might be. The Bureau chief stressed that the Bureau's current monitoring efforts should not be defined in terms of a "formal, structured program." Monitoring for him constitutes the body of information within the FCC that enables the Bureau to be assured that the FCC is meeting its commitment to promote universal service. The Bureau chief maintains that the FCC currently has the relevant data needed to evaluate whether its regulatory decisions are working in the public interest. He believes that the expenditure of additional staff resources on detailed monitoring of universal service is not warranted in view of the fact that IAD is finding no signs of trouble in the three areas that it is currently monitoring.

Monitoring the Level of Residential Telephone Subscribership

Determining the level of residential telephone subscribership (commonly called the "penetration level") is basic to any evaluation of universal telephone service. IAD currently tracks residential penetration by means of the U.S. Census Bureau's monthly "Current Population Survey" (CPS), which gathers demographic, employment, and income information from a nationwide statistical sample of 58,000 households. Partly in response to a suggestion by the FCC, the Census Bureau in 1983 began asking surveyed households whether they have a telephone in their residence. From this data, the Census Bureau calculates percentages for telephone penetration at the national and state levels, and by demographic variables such as income and race.

Penetration Data at the National Level

Telephone penetration at the national level has remained relatively stable between 1983 and 1986, with the most recent data suggesting a slight upward trend. The first CPS figures on penetration, for November 1983, indicated that 91.4 percent of the nation's households had telephones. As table II.1 shows, the March 1986 CPS put the national penetration level at 92.2 percent—0.8 percent higher. A statistical value referred to by the FCC as the "critical value" is used to determine whether differences in data are statistically significant. The critical value for determining a significant change over time in national penetration is 0.5 percent at the 95 percent confidence level. Changes which are less than or equal to this value are likely due to sampling error and cannot be regarded as demonstrating statistically significant change. Whether the latest March 1986 CPS data indicates a significant change depends on the baseline from which the change is measured. In past reports, IAD has noted that telephone penetration seems to vary seasonally, with autumn as a low point and spring as a high point. It therefore seems appropriate to compare the March 1986 percentage with the March 1984 and March 1985 percentages. Using this seasonal approach, the March 1986 data indicates that a significant increase in national penetration has not taken place (92.2 - 91.8 = 0.4), although it is encouraging that this percentage is the highest reported by the CPS since this data was first gathered in 1983.

Table II.1: Percentage of U.S. Households With a Telephone

Survey Period	Percent[a]
November 1983	91.4
March 1984	91.8
July 1984	91.6
November 1984	91.4
March 1985	91.8
July 1985	91.8
November 1985	91.9
March 1986	92.2

[a]The critical value for determining a significant change in national telephone penetration over time is 0.5 percent at the 95 percent confidence level.

Source: U.S. Census Bureau

The FCC maintains that the percentage of households with a telephone is at an all-time high. Earlier census data, however, suggests that residential telephone penetration may have been higher than at present. The 1980 Decennial Census gathered penetration data as part of the detailed census form sent to a national sample of households. The results indicated that 92.9 percent of the nation's households had telephones in 1980. At issue is whether the data from the 1980 Census and the CPS are comparable. IAD maintains that the data are not comparable because the wording and the context of the questions on telephone penetration are different, as are the sampling methodologies. We discussed this issue of comparability with the chief of the census design branch of the Census Bureau. He maintains that the data are comparable regardless of wording and context differences. It may be, then, that the nation experienced a decline in penetration between 1980 and 1983, although the CPS data clearly indicates that penetration has not declined since 1983.

Penetration Data at the State Level

The CPS data also indicate relatively stable penetration on a state-by-state basis. The state data, however, are less decisive than the national data. Due to the CPS's sampling methodology, the critical values for determining significant changes in penetration for the states are generally much larger than the 0.5 percent critical value for the national level, ranging from 1.5 percent for California to 5.9 percent for South Carolina. As a consequence, the CPS data are less sensitive to penetration changes at the state level than at the national level, especially for states with high critical values. The state figures for November 1983 to March 1986 are presented in table II.2.

Table II.2: Percentage of Households With a Telephone by State

State (critical value)[a]	1983	1984			1985			1986
	Nov.	Mar.	July	Nov.	Mar.	July	Nov.	Mar.
Alabama (3.6)	87.9	88.9	90.3	86.1	88.4	89.1	89.9	89.1
Alaska (5.2)	83.8	85.8	87.6	86.1	89.4	86.4	85.7	88.4
Arizona (4.4)	88.8	89.6	84.2	87.0	87.0	88.0	96.9	90.8
Arkansas (5.8)	88.2	87.1	87.8	84.8	85.7	86.6	85.5	85.8
California (1.5)	91.7	92.8	92.2	92.4	93.0	92.7	93.0	93.3
Colorado (3.3)	94.4	94.7	91.9	93.2	96.2	93.7	93.1	95.0
Connecticut (2.8)	95.5	94.5	96.0	96.0	94.9	96.5	97.1	97.3
Delaware (3.1)	95.0	95.4	93.7	93.7	96.6	94.4	93.4	95.2
Dist. of Columbia (3.9)	94.7	96.1	93.5	95.1	91.6	93.6	95.6	91.9
Florida (2.8)	85.5	89.9	89.6	86.6	88.8	89.5	90.3	89.1
Georgia (4.9)	88.9	85.8	86.8	86.0	89.0	88.4	85.4	88.2
Hawaii (2.7)	94.6	93.6	95.1	91.9	93.3	92.7	93.1	94.3
Idaho (4.1)	89.5	90.4	91.0	90.8	91.7	91.1	92.6	92.1
Illinois (2.1)	95.0	95.7	93.6	93.2	94.4	93.4	93.3	93.4
Indiana (3.3)	90.3	91.8	91.2	91.7	91.7	92.8	92.4	92.9
Iowa (3.0)	95.4	95.7	97.5	95.4	96.0	94.6	94.7	95.5
Kansas (2.5)	94.9	94.4	95.1	93.5	94.8	93.9	94.4	93.9
Kentucky (5.3)	86.9	87.1	88.3	89.1	89.0	86.8	86.4	87.3
Louisiana (4.3)	88.9	89.8	88.7	90.5	90.5	90.3	90.2	90.5
Maine (3.7)	90.7	94.4	92.1	93.9	94.2	93.8	94.2	92.8
Maryland (3.2)	96.3	96.1	94.9	96.1	95.2	96.2	95.3	95.7
Massachusetts (2.5)	94.3	95.7	96.5	95.4	95.6	95.0	94.8	96.3
Michigan (2.6)	93.8	93.1	93.0	92.4	92.6	93.5	92.6	93.7
Minnesota (2.6)	96.4	95.8	96.6	95.0	97.1	96.8	95.3	95.6
Mississippi (5.0)	82.4	81.8	83.1	82.2	81.6	80.1	81.0	81.9
Missouri (3.5)	92.1	92.1	91.3	91.0	92.6	92.9	92.0	93.0
Montana (5.3)	92.8	90.2	91.6	91.1	92.2	90.0	92.0	93.0
Nebraska (3.3)	94.0	96.4	94.8	95.9	96.4	95.0	94.6	96.0
Nevada (4.9)	89.4	93.0	88.2	89.8	91.3	90.3	94.0	91.0
New Hampshire (4.0)	95.0	94.7	95.9	92.4	93.4	93.0	93.4	93.9
New Jersey (2.4)	94.1	93.5	96.0	94.8	95.1	95.4	94.1	94.2
New Mexico (5.7)	85.3	81.0	81.2	84.0	85.0	85.1	82.1	86.0
New York (2.1)	90.8	91.2	92.3	91.8	92.0	91.2	93.0	92.9
North Carolina (3.9)	89.3	88.5	87.9	88.5	89.8	89.2	89.2	90.0
North Dakota (3.8)	95.1	94.1	95.2	94.6	95.0	95.1	95.7	95.0
Ohio (2.2)	92.2	93.2	93.4	90.8	91.7	93.3	91.7	93.6
Oklahoma (3.9)	91.5	91.1	89.4	90.3	90.3	87.0	89.2	89.7

State (critical value)[a]	1983	1984			1985			1986
	Nov.	Mar.	July	Nov.	Mar.	July	Nov.	Mar.
Oregon (3.4)	91.2	91.1	92.2	88.5	89.2	91.0	90.6	92.6
Pennsylvania (1.6)	95.1	94.4	95.1	95.1	94.2	95.8	95.8	95.9
Rhode Island (3.0)	93.3	94.2	92.7	93.9	93.4	95.1	93.6	95.0
South Carolina (5.9)	81.8	84.5	83.6	82.9	87.2	85.6	87.6	88.8
South Dakota (3.7)	92.7	92.8	92.8	94.0	92.4	93.1	92.2	93.4
Tennessee (4.8)	87.6	87.0	88.3	90.1	87.7	88.3	91.9	89.7
Texas (2.6)	89.0	88.2	87.6	89.4	87.8	87.7	88.9	87.7
Utah (4.5)	90.3	92.2	93.2	92.2	95.3	93.3	93.2	93.8
Vermont (5.2)	92.7	91.2	93.1	92.5	90.6	93.0	95.1	93.7
Virginia (4.0)	93.1	93.2	93.0	92.9	92.8	90.4	92.0	92.0
Washington (4.0)	92.5	92.7	93.6	92.7	92.7	96.1	95.3	92.2
West Virginia (4.5)	86.1	87.2	86.5	89.4	88.1	88.7	86.1	90.7
Wisconsin (3.1)	94.8	95.9	93.5	96.3	93.8	94.4	94.1	94.6
Wyoming (4.5)	89.7	89.2	88.4	92.1	91.7	92.7	95.7	90.5

[a]The critical values are used for determining a significant difference in telephone penetration over time at the 95 percent confidence level. Changes less than or equal to the critical value for each state are likely to be due to sampling error and thus cannot be regarded as demonstrating that there has been a change in telephone penetration.

Source: U.S. Census Bureau

The case of Oklahoma demonstrates some of the difficulties in drawing conclusions about telephone penetration at the state level. The CPS penetration figures for Oklahoma range from a high of 91.5 percent in November 1983 to a low of 87.0 in July 1985. The critical value for Oklahoma is 3.9 percent. The data, then, suggest that there may have been a small, statistically significant drop in Oklahoma's penetration between 1983 and 1985, since the amount of change is greater than the critical value. However, the figure for Oklahoma from the November 1985 survey puts its penetration at 89.2 percent—more than 2 points higher than the penetration figures from the previous July. The March 1986 figure is even higher—89.7 percent. Considering that the penetration figures for Oklahoma have averaged at 89.8 percent between November 1983 and March 1986, it might well be argued that Oklahoma's penetration has remained steady and that the one low figure of 87.0 percent is due to random variation. Further CPS updates may or may not clarify the penetration trend in Oklahoma.

The CPS figures also show that the penetration levels in a few states are considerably lower than in others. The average penetration levels for the period between November 1983 and March 1986 for Alaska,

Arkansas, Mississippi, New Mexico, and South Carolina are below 87 percent. The FCC attributes these lower penetration levels to the geographic and demographic characteristics of the states. Consequently, it does not believe these low penetration levels in themselves constitute a universal service issue requiring action on the FCC's part.

The CPS penetration data cannot help the FCC determine whether penetration changes are taking place in rural areas within individual states because the data cannot be usefully broken down below the state level.

Telephone Penetration Among Demographic Groups

Telephone penetration among low-income groups has been of particular concern to the Congress. The Census Bureau breaks down the national CPS penetration figures by demographic variables, including income. Table II.3 shows penetration by income for all households and also by race for March 1986.

Table II.3: Telephone Penetration by Income, March 1986

Figures in percent

Income	All Races	White	Black	Hispanic
Total	92.2	93.6	82.0	81.5
Under $5,000	71.1	74.0	63.8	56.7
$5,000-$7,499	82.7	85.1	72.0	68.7
$7,500-$9,999	87.6	88.8	82.1	72.1
$10,000-$12,499	89.5	90.6	82.1	78.5
$12,500-$14,999	91.3	92.0	87.6	84.6
$15,000-$17,499	92.9	93.6	88.0	84.9
$17,500-$19,999	94.6	95.2	90.1	88.1
$20,000-$24,999	96.3	96.7	93.6	92.3
$25,000 or more	Penetration levels for all groups approximate or exceed the March 1986 national average of 92.2 percent.			

Source: U.S. Census Bureau

Table II.3 clearly indicates a strong relationship between income level and telephone subscribership for all races. The FCC, in its December 1985 lifeline assistance decision, addressed the issue of penetration by income. While noting that CPS data indicated no sign of declining penetration within each income group between 1983 and 1985, the FCC recognized that penetration among the lowest income groups was holding steady at plateaus substantially below the national average. The FCC therefore adopted a subsidy plan in order "to assist low income households in affording telephone service during this period of rapid change in the telephone industry." This plan is discussed briefly in appendix III.

The FCC has contracted with the Census Bureau to provide the FCC with computer tapes containing detailed CPS data from the March surveys, and now has tapes for March 1984 and March 1985. Using this detailed data, IAD broke down telephone penetration by geographic indicators (such as regions of the country and urban vs. non-urban) and by demographic indicators (such as family size, and whether the household lives in subsidized housing or receives food stamps, energy assistance, or subsidized school lunches.) IAD published the 1984 and 1985 March data in its April 1986 publication, "Telephone Penetration and Household Characteristics." The data are presented in a series of 41 tables. Although IAD presented little analysis with the tables, it made two broad generalizations about the data. First, it observed that "[t]he most notable pattern that emerges from looking at the data is the relationship between penetration and income or income related variables." (For example, households receiving food stamps have a lower penetration level than those that do not.) Second, IAD noted that "the growth in the number of households with a phone closely matched the growth in the total number of households, while the number of households for which a phone was not available remained virtually unchanged [between 1984 and 1985]."

Although these tables provide interesting background data on telephone penetration, they are not useful for timely monitoring of the current state of residential telephone service. The March CPS data tape is not available to the FCC until late autumn, and by the time IAD processes the data it is about a year old. IAD believes that the March data would be of most use as a means of analyzing which groups were affected by significant changes in penetration first detected in the basic national penetration figures that IAD receives three times a year from the Census Bureau.

Monitoring Changes in Telephone Prices

Both the Congress and consumer groups have expressed concern about whether telephone service will remain "affordable" in the wake of industry restructuring and regulatory change. According to the chief of the Common Carrier Bureau, the Communications Act of 1934 does not directly address the issue of "affordability." He noted that the Act discusses telephone rates in terms of "reasonable rates," not "affordable rates" and added that the term "reasonable rates" has been interpreted by the courts to mean the practice of pricing services close to their costs.

As part of its monitoring of universal service, IAD is, nevertheless, tracking telephone prices by means of the Bureau of Labor Statistics' Consumer Price Index (CPI) and Producer Price Index (PPI). The CPI, an urban-oriented index covering about 80 percent of the nation, measures average price changes in a variety of consumer goods and services, including local telephone charges, intrastate and interstate toll charges, and total telephone charges. The CPI also measures the overall price change in all the goods and services included in the index, which gives the overall cost-of-living index. The PPI, on the other hand, includes both urban and rural areas. It too gives price indexes for selected telephone services, including local services for residences and businesses, and various forms of toll service. IAD considers the CPI and PPI data generally encouraging and has concluded that telephone prices are beginning to stabilize after a recent period of increases.

IAD notes that between 1967 and 1985 the CPI data show that the overall cost-of-living index more than tripled, while the price of total telephone services (local and toll service, installation and equipment, taxes and subscriber line charges, and other costs) only doubled. In IAD's view, this indicates that "clearly, over a long period of time, telephone service has been a major bargain." IAD adds that although the CPI data show the price of telephone services rising more quickly in recent years, the rate of increase declined in 1985 to 4.7 percent—close to the 3.8 percent increase in the cost-of-living rate. Table III.1 presents the CPI data on changes in the price of total residential telephone services over the last 10 years.

Table III.1: CPI Data on the Price of Total Telephone Services (All Urban Consumers)

Year	December Index	Percent Change (December to December)
1975	128.9	•
1976	131.5	2.0
1977	132.2	0.5
1978	133.3	0.8
1979	134.3	0.8
1980	140.3	4.5
1981	156.8	11.8
1982	168.2	7.3
1983	174.3	3.6
1984	190.4	9.2
1985	199.3	4.7

Source: U.S. Department of Labor, Bureau of Labor Statistics

The price of one of the components of total residential telephone services—basic local service—is of particular concern to the Congress and consumers. To monitor the price of local residential service, IAD uses the PPI index, which it believes is the best available measure of changes in the price of local service. Unlike the CPI's local rate index, the PPI's local rate index is based on the price of basic flat-rate service and excludes installation charges, excise taxes, subscriber line charges, all equipment charges except for the cost of leasing one telephone, and added service features such as Touch-Tone dialing. In addition, as previously noted, the PPI includes rural as well as urban areas. Table III.2 presents the PPI data on changes in the price of flat-rate residential local service over the past 10 years.

Table III.2: PPI Data on the Cost of Flat-Rate Local Residential Service

Year	December Index	Percent Change (December to December)
1975	116.2	•
1976	119.6	2.9
1977	120.5	0.8
1978	124.2	3.1
1979	126.2	1.6
1980	135.1	7.1
1981	156.2	15.6
1982	170.2	9.0
1983	170.6	0.2
1984	188.4	10.4
1985	194.5	3.2[a]

[a]Does not include residential subscriber line charge. With this charge included, the FCC calculates that the PPI would show an 11 percent increase for 1985.

Source: U.S. Department of Labor, Bureau of Labor Statistics

In 1984, the PPI shows the price of flat-rate local residential service rose more than 10 percent at a time when the general cost-of-living increase was 4 percent. IAD maintains, though, that this situation improved in 1985, since the 1985 PPI data shows that the price of local service increased by only 3.2 percent, which is lower than the 3.8 percent increase in the 1985 cost-of-living index.

The 1985 PPI figure does not, however, include the effect of the FCC's residential subscriber line charge, which went into effect in mid-1985. This charge, originally $1 a month for each telephone line, is collected as part of the monthly local service bill. IAD has calculated that if this charge were included in the PPI, it would have shown residential local service prices increasing by 11 percent—one point higher than the previous year and nearly triple the 3.8 percent increase in the cost-of-living index for 1985. The FCC increased the subscriber line charge to $2 per line in June 1986. We calculate that this alone may increase the PPI for local service by as much as 7 percent in 1986. (The PPI will begin to include the subscriber line charge in the price of local service sometime in 1986.) The increase in the subscriber line charge, however, was accompanied by an average 11.3 percent drop in interstate long distance rates for residential customers of AT&T. Other long distance companies are expected to lower their rates as well.

As previously noted, the FCC adopted a life-line assistance program in late 1985. Subsidies provided by this program could more than offset

increases due to the subscriber line charge for qualifying low-income subscribers living in states that choose to participate in the program. The maximum federal-state subsidy provided is double the amount of the prevailing residential subscriber line charge. The FCC has also noted that various types of local measured service (in which local service charges depend on usage) offer ways for subscribers to control their local service costs. The FCC has emphasized, though, that the establishment of local measured service options is a state regulatory matter.

One important limitation in using the CPI and PPI to monitor changes in the price of telephone services is that these telephone indexes are national only. They do not provide measures of price changes at the state or local level and, consequently, do not provide the FCC with data to monitor whether telephone prices in some states are rising faster than in other states. This is a significant limitation because the effects of some FCC decisions may impact certain telephone companies and subscribers more than others. For example, the FCC recently decided that telephone companies should allocate no more than 25 percent of their fixed costs to the interstate jurisdiction (where these costs are recovered from interstate toll revenues). In the past many telephone companies were allowed to allocate a much higher percentage of their fixed costs to the interstate jurisdiction in order to hold down the cost of local service. Bell companies in Arizona, the District of Columbia, Montana, Nevada, New Hampshire, Vermont, and Wyoming allocate (on the average) more than 40 percent of their fixed costs to interstate toll. (This percentage tends to be higher among many small, independent companies.) Telephone subscribers in these states, therefore, may face higher local service rate increases than those in other states as their companies begin to recover more of their fixed costs from intrastate service revenues.

Monitoring Telephone Company Revenue Requests and Awards

One of the FCC's major monitoring concerns is to obtain advance warning of potentially large revenue increases that might result in substantially higher local service rates. IAD therefore gathers data on the amount of revenue increases requested by the major telephone companies for intrastate services (such as local service and intrastate toll) and the amounts awarded to them by state public utilities commissions.

IAD compiles and publishes the request and award data four times a year for the 22 Bell Operating Companies and the larger independent telephone companies that together provide about 95 percent of the nation's local telephone service. Data from IAD's January 1986 summary are presented in table IV.1.

Table IV.1: Data From State Rate Cases (Major Telephone Companies)[a]

Dollars in millions

	Completed Cases		Pending Cases
Year	Revenue Increases Requested	Revenue Increases Awarded	Revenue Requests Pending at Year's End
1982	$5,250.0	$2,881.9	N/A[b]
1983	$4,510.6[c]	$1,811.2[c]	$6,970.0
1984	$7,321.4	$3,875.5	$3,672.3
1985	$2,966.6	$1,328.3	$1,855.5

[a]These major companies provide about 95 percent of the nation's local telephone service.

[b]1982 data on pending cases not included in the FCC's rate case summary.

[c]First 9 months only.

Source: Federal Communications Commission

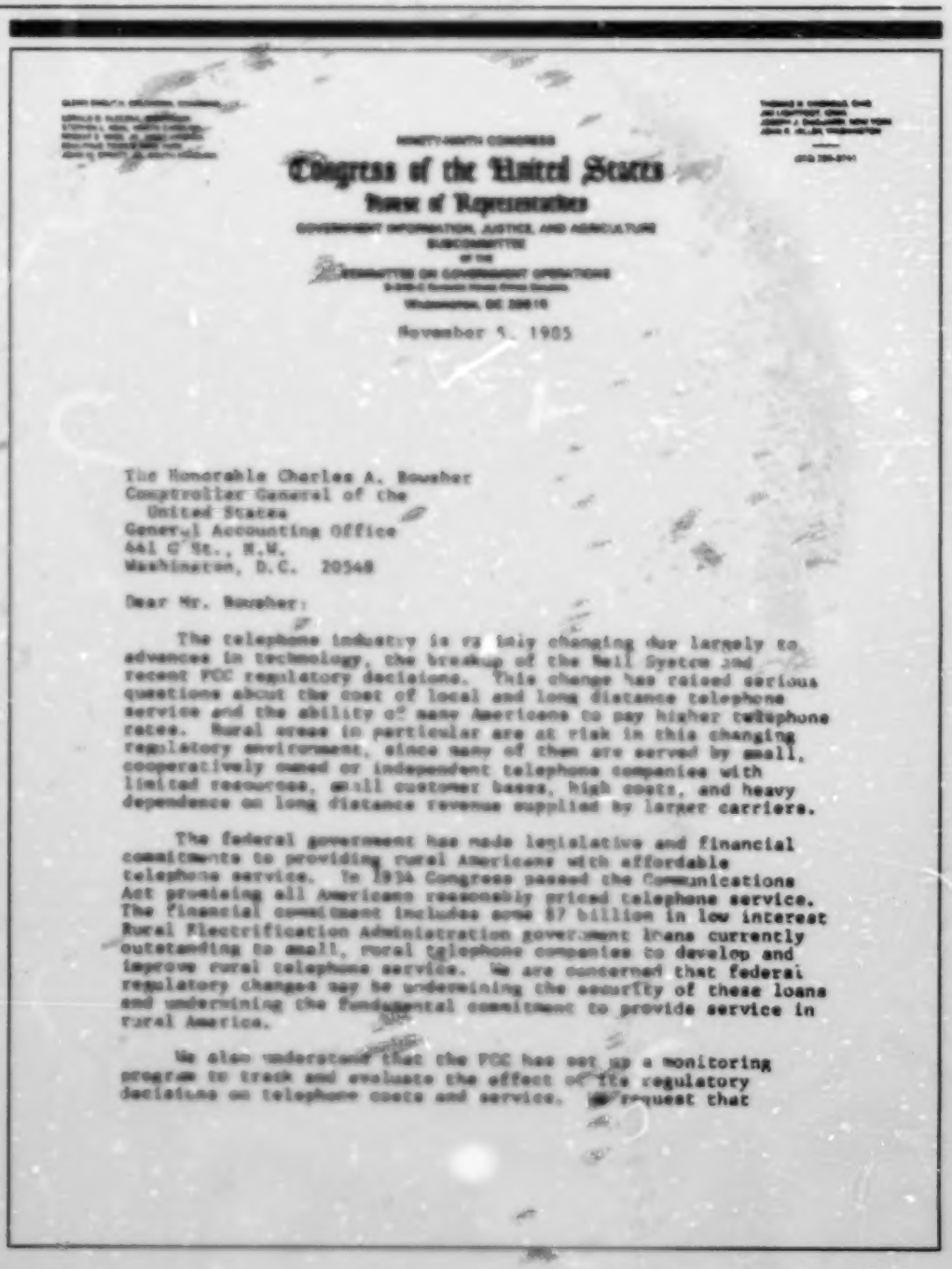
As table IV.1 shows, the total amount of revenue increases actually awarded by the state commissions to the major telephone companies declined from nearly $3.9 billion in 1984 to about $1.3 billion in 1985. The table also shows that the amount of pending revenue requests has fallen sharply, from almost $7 billion at the end of 1983 to about $1.7 billion at the end of 1985. IAD concludes from this information that there will be substantially less pressure on the state commissions to award rate increases during 1986. Data from the first quarter of 1986 support this view—both requests and awards were at their lowest levels since the FCC began gathering this data in 1983.

The scope of IAD's monitoring of requests and awards has two limitations that should be noted. First, revenue requests and revenue awards

are only two of the elements in a rate case. Another element is the development of new rates for the various intrastate telephone services offered by the companies in order to generate the revenue increases awarded to them. IAD's monitoring of state rate cases does not routinely examine the actual dollar increases in the local residential rates paid by the residential customers of the large telephone companies. IAD officials told us that they only look at rate increases in cases where unusually large revenue increases are awarded, adding that they have not looked at many recently because there have not been many unusually large awards lately. In general, IAD assumes that the state commissions are still requiring telephone companies to generate the bulk of their awards through increases in rates for intrastate services other than local residential service, such as local business services, intrastate toll service, and installation and repair charges.

The second limitation in the scope of this monitoring is that IAD does not include data from over 1,350 small, independent telephone companies that provide the remaining 5 percent of the nation's telephone service. As a class, these small companies are important because they may face serious risks in the changing telephone environment. These companies have much smaller subscriber bases upon which to structure rate increases—only a few hundred or a few thousand lines. They also tend to have fewer opportunities to generate revenue from service to businesses because of their rural locations. IAD officials believe, however, that the cost and effort needed to collect revenue and rate data from these companies would not add much to the general industry picture on revenue requests and awards currently being monitored.

Request Letter



NINETY-NINTH CONGRESS

Congress of the United States

House of Representatives

GOVERNMENT INFORMATION, JUSTICE, AND AGRICULTURE SUBCOMMITTEE OF THE COMMITTEE ON GOVERNMENT OPERATIONS

WASHINGTON, DC 20515

November 5, 1985

The Honorable Charles A. Bowsher
Comptroller General of the
United States
General Accounting Office
441 G St., N.W.
Washington, D.C. 20548

Dear Mr. Bowsher:

The telephone industry is rapidly changing due largely to advances in technology, the breakup of the Bell System and recent FCC regulatory decisions. This change has raised serious questions about the cost of local and long distance telephone service and the ability of many Americans to pay higher telephone rates. Rural areas in particular are at risk in this changing regulatory environment, since many of them are served by small, cooperatively owned or independent telephone companies with limited resources, small customer bases, high costs, and heavy dependence on long distance revenue supplied by larger carriers.

The federal government has made legislative and financial commitments to providing rural Americans with affordable telephone service. In 1934 Congress passed the Communications Act promising all Americans reasonably priced telephone service. The financial commitment includes some $7 billion in low interest Rural Electrification Administration government loans currently outstanding to small, rural telephone companies to develop and improve rural telephone service. We are concerned that federal regulatory changes may be undermining the security of these loans and undermining the fundamental commitment to provide service in rural America.

We also understand that the FCC has set up a monitoring program to track and evaluate the effect of its regulatory decisions on telephone costs and service. We request that

The Honorable Charles A. Bowsher
November 5, 1985

you examine how well this program is designed and being carried out, especially in regard to the monitoring of rural telephone service. It is also important to ascertain how the FCC plans to insure that adequate service and reasonable rates in rural areas are not jeopardized by changes it adopts before finishing its monitoring and reevaluation. This information would be particularly useful for future hearings.

We also request that you undertake a broad review of the key issues and problems facing rural telephone companies and customers, particularly in regard to maintaining universal service at affordable prices. What are the major regulatory changes affecting rural telephone service? How are state regulatory changes impacting on federal regulation? What long-term problems need to be addressed in order to insure continued rural telephone service at reasonable prices?

The questions we have posed in this letter are obviously broad and by no means all inclusive. Our staff will be available to cooperate with GAO and further define the areas of study. Please contact Don Gray at 225-6427 and Leo Jardot at 225-3741 for further information and consultation.

We look forward to your assistance on these important issues.

Sincerely,

Mike Synar
Chairman
Subcomittee on Environment, Energy, and Natural Resources

Glenn English
Chairman
Subcommittee on Government Information, Justice, and Agriculture

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